

## Research of the technology for the production of modified sulfur bituminous binders

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### Abstract

© 2016 Authors. In this article, a review of the literature on the technology of production of a paving material based on elemental sulfur was made, and a laboratory test of this technology was carried out at the Department of Highly Viscous Crude Oil and Natural Bitumen. Attempts to mix sulfur with bitumen in order to reduce the cost of road construction and sulfur utilization were undertaken earlier, however, the mixtures obtained did not provide the appropriate quality, and the process was difficult to implement. The article proposes a unique technology for obtaining not a physical mixture, but the formation of a chemical bond between sulfur and bitumen with the formation of bitumen polymers. This technology becomes possible with the use of a catalyst specially developed by the initiators of the project and has no analogues in the world practice. Thus, the scientific novelty of the study is determined by the fact that for the first time an analysis is made of the composition of the components of the complex, which are subsequently introduced into the mixture with the feedstock in order to obtain the target product, which is gray-bitumen.

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### Keywords

Bitumen, Modifier, Polymer, Sulfur, Sulfur Bitumen, Sulfur concrete

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